

PLEASE AMEND THE SPECIFICATION AS INDICATED BELOW:

Paragraph beginning at page 1, line 5:

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a Continuation of U.S. Patent Application Ser. No. 09/855,447 filed May 15, 2001.

BACKGROUND OF THE INVENTION

The invention relates to a device for controlling [the means delivering] delivery of sheets from a stack to a machine for processing them.

Paragraph beginning at page 1, line 9:

The operation of successively taking the top sheet from a stack of sheets to form a layer of sheets for insertion into a printing or cutting machine is well-known and numerous existing devices serve this purpose. In the case of a sheet-by-sheet supply of solid [fibre] fiber board or corrugated board, flatness is a frequent problem, since the top surface of the stack may vary considerably in level. This is because the thickness of a cardboard sheet may vary in dependence on a number of external factors such as the ambient humidity or the storage conditions[, the result being]. This provides a difference in height between the front and rear of the stack and also between the [centre] center and edges thereof.

Paragraph beginning at page 1, line 24:

It has already been proposed to obviate this disadvantage by means of a device described in CH 651 807, comprising a mechanism for lifting the stack, a sheet-inserting means comprising a gripping element, means for detecting the top level of the stack connected to a computer acting on an electric motor of the stack-lifting mechanism and means for raising the stack in dependence on the [said] top level. When the front level detector cannot see the stack of sheets, a command pulse for raising the stack is sent to the driving motor, which sends a pulse driving the stack-lifting mechanism. Depending on the thickness of the stack of sheets, the duration of the pulse is varied to obtain a

variable rise step, so as to bring the top surface of the stack to the same level after the departure of each sheet from the stack.

Paragraph beginning at page 2, line 13:

A device of this kind considerably improves the accuracy of the top level of the stack, more particularly of the front vertical surface[, but all the same]. Nonetheless, the disadvantage of raising the stack of sheets by pulses is that the least offset between successive pulses may result in a variation in the step or pitch of the resulting layer of sheets. If the step tolerance exceeds a certain amount, the machine processing the layer of sheets stops and has to be restarted, resulting in substantial loss of production.

Paragraph beginning at page 2, line 28:

SUMMARY OF THE INVENTION

To this end, the invention relates to a device for controlling the means delivering sheets from a stack to a machine for processing them [as defined by claim 1]. A device for controlling delivery of sheets from a stack includes a lifting mechanism for a stack of sheets. A sheet inserter removes sheets from the top of the stack to move them. A detector detects the front top level of the stack. A computer is connected to the detector. The computer acts on an electric motor for the stack lifting mechanism and the stack is raised. The detector of the front level of the stack measures the extent of variations in the level of the stack. A source of information connected to the computer relates to the supply frequency in real time and to the nominal thickness of the sheets. The computer output is connecting to a frequency varying device for controlling the motor to the stack raising mechanism. The computer is programmed so that the signal at its output is characteristic of the difference between the measured level of the stack and the calculated level thereof.

Paragraph beginning at page 3, line 5:

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a sectional view of a sheet supply station and

Paragraph beginning at page 3, line 12:

DESCRIPTION OF A PREFERRED EMBODIMENT

Fig. 1 shows a supply station of the kind described in CH 651 807, to which reference should be made for further details. It comprises a stack lift comprising a lifting grid 1 suspended on chains 2. One end of each chain 2 is attached to the lifting grid 1 via at least two, and preferably four, lugs 3 placed on either side of the sheet-supplying stack 4. The other end of each chain 2 is connected to an attachment member through which a screw extends. Each chain 2 passes around a chain wheel 7 mounted on shafts 8. A device vertically drives the lifting grid 1 via the chains 2. The device can comprise the attachment (not shown) in its motion along the screw. The screw is held by two bearings (not shown) and driven by a geared motor 11 equipped with a coder 41. Of course, use can be made of any geared motor device capable of rotating the shaft 8 secured to the chain wheels 7.

Paragraph beginning at page 5, line 6:

A retractable front abutment [[32]] is mounted so as to be pivotable around an axis 34 near the top level of the front surface of the stack of sheets 4. The front abutment 33 is pivoted by a lever 35 controlled by a cam 36 actuated by the device driving the insertion station supplied by sheets from the pile 4. The abutment 33 has a window (not shown) [centred] centered along the central axis of the stack of sheets 4, giving the detector 32 a constant view of the stop level of the stack 4.